

CLAIMS

After having described and determined the nature and scope of this invention as well as the way it is to be carried out, the following is claimed as of ownership and exclusive right:

1. Oil extraction equipment, characterized in that it comprises a proportionally wide endless band which acts as a conveyor belt having a first section extended between a first outer set of holding rolls that guide a cellar top end frame, mounted on the hole of the latter, in order to connect the second and third hanging sections of the respective adjacent rolls which are longitudinally extended at the same level in respect with each other, by the inner part of the well with free movement with regard to the lining-wall thereof, one of them being up stream and the other one being down stream, and connected with each other by means of a second set of rolls having a lower end head which tautens them, and which as a diver is deeply submerged in the oil layer, thus providing a counterweight capable of securing the permanent laying of the band along its length, and comprising said second and third sections their respective sectors out of the well hole, of which at least the corresponding up stream section is operatively related with the means capable of causing the detachment of the oil layer adhered to both faces of the band, said means being connected with corresponding collecting means, including said top cellar end frame, where propelling means of the band coupled to at least a motor pulley integrated in said first set of rolls and connected thereto by means of a friction transmission, being both sections of the band extended within the well and operatively related with supplementary guiding and retaining means, which are jointly extended together thereto and suspended independently of said sections from said top cellar end frame.

2. Oil extraction equipment according to claim 1, characterized in that said guiding means of the band sections extended within the well are comprised by a centralizing train which is extended between both sections and suspended by its top end of said cellar frame bearing its whole weight in said frame completely independently of said sections.

3. Oil extraction equipment according to any of claims 1 and 2, characterized in that said centralizing train forming guiding means is anchored by one lower end of the set of its composing elements to the diver head as a simple hitch positioning device of this train end with respect to both band sections through said diver head.

4. Oil extraction equipment according to any of claims 2 and 3, characterized in that said centralizing train is composed of several centralizing carriers which are spaced out and hitched up to each other, and it is also suspended from said top cellar end frame bearing its whole weight on said frame by means of sections of a suspension belt extending on a spaced out basis between both sections of the lifting belt, which are capable of keeping said train laying at the same level thereof without making any contact with any of them and without exerting any loading action over them.

5. Oil extraction equipment according to claim 4, characterized in that each of the centralizing carriers has its own frame with their respective hitching means for said sections of the suspension belt and at the same time said frame provides two parallel passages for each of the sections of the lifting belt, of which the corresponding upstream section with the oil load is limited between two channeled rolls, two ends that roll over the inner face thereof and another intermediate roll which rolls over the outer section face, while the passage for the downstream section is limited between both end rolls that roll over their inner face and an intermediate cross bar located as a shoe against its outer face at the level of said intermediate roll of the adjacent passage.

6. Oil extraction equipment according to claim 4, characterized in that said frame of each centralizing carriers provides the respective corner portions capable of acting as shoes with regard to the well wall thus keeping the intermediate roll separated from it.

7. Oil extraction equipment according to any of claims 4 and 5, characterized in that the set of rolls of the diver head is in a case having corner edges capable of acting as shoes with regard to the well wall, having a head with narrow grooves for a substantially adjusted passage for both band sections and a multiperforated bottom with little unloading holes for thin granules such as sand.

8. Oil extraction equipment according to any of the preceding claims, characterized in that said operating means include two motor pulleys arranged together at the same level in operative friction transmission relationship with said first section of the lifting belt, coupled with each other, including between both pulleys an intermediate roll having a free rotation capable of lengthening the contact length between the band and their respective friction rims.

9. Oil extraction equipment according to any of the preceding claims, characterized in that in an operative relationship with said friction transmission between the first section of the lifting band and the motor pulley, adjusting means are included between them.